# **ROOM ADDITION 2013 PRESECRIPTIVE ENERGY REQUIREMENTS(Climate Zone 12)**

## □ **ENVELOPE** – Roof / Ceiling Assemblies

COMPONENT	ADDITION ≤ 400 ft <sup>2</sup>	400 ft <sup>2</sup> < ADDITION ≤ 700 ft <sup>2</sup>	ADDITION > 700 ft <sup>2</sup>
INSULATION	R-38	R-38	R-38
COOL ROOF <sup>1,2</sup>	Required <sup>3</sup> for pitch > 2:12	Required for pitch > 2:12	Required for pitch > 2:12
RADIANT BARRIER	Required	Required	Required

- 1. Not required on any low-sloped roof (pitch ≤ 2:12, or 9.5°)
- 2. Where cool roof is required, either 3-yr aged solar reflectance = 0.20 min & thermal emittance = 0.75 min OR SRI = 16 min
- 3. Cool roof is not required for additions  $\leq$  300 ft<sup>2</sup>

### □ **ENVELOPE** – Fenestration

COMPONENT	ADDITION ≤ 400 ft <sup>2</sup>	$400 \text{ ft}^2 < \text{ADDITION} \le 700 \text{ ft}^2$	ADDITION > 700 ft <sup>2</sup>
ALLOWABLE TOTAL	Greater of 75 ft <sup>2</sup> OR 30% of	Greater of 120 ft <sup>2</sup> OR 25% of	Greater of 175 ft <sup>2</sup> OR 20% of
GLAZING AREA	addition's CFA⁴	addition's CFA⁴	addition's CFA⁴
ALLOWABLE TOTAL WEST	60 ft <sup>2</sup> max	60 ft <sup>2</sup> max	Greater of 70 ft <sup>2</sup> OR 5% of
FACING GLAZING AREA			addition's CFA⁴
U-Factor	0.32 max	0.32 max	0.32 max
SHGC⁵	0.25 max	0.25 max	0.25 max

- 4. Conditioned Floor Area
- Solar Heat Gain Coefficient

#### □ **ENVELOPE** – Insulation

COMPONENT	ADDITION ≤ 400 ft <sup>2</sup>	400 ft <sup>2</sup> < ADDITION ≤ 700 ft <sup>2</sup>	ADDITION > 700 ft <sup>2</sup>
EXTERIOR WALL	R-13 in 2x4 walls	R-13 in 2x4 walls	R-13 cavity + R-5 rigid OR
INSULATION	R-19 in 2x6 walls	R-19 in 2x6 walls	R-15 cavity + R-4 rigid
RAISED FLOOR	R-19	R-19	R-19
INSULATION			
SLAB FLOOR INSULATION	Not Required	Not Required	Not Required

### ☐ MECHANICAL – HVAC

COMPONENT	ADDITION ≤ 400 ft <sup>2</sup>	400 ft <sup>2</sup> < ADDITION ≤ 700 ft <sup>2</sup>	ADDITION > 700 ft <sup>2</sup>
WHOLE HOUSE FAN	Not Required	Not Required	Not Required <sup>6</sup>
(NIGHT TIME COOLING)			
WHOLE BUILDING FAN	Not Required	Not Required	Not Required <sup>7</sup>
(INDOOR AIR QUALITY)			
ADDING SPACE <sup>8,9</sup>	All applicable Package A	All applicable Package A	All applicable Package A
CONDITIONING SYSTEMS	Requirements must be met	Requirements must be met	Requirements must be met
REPLACING SPACE <sup>8,9</sup>	All applicable Package A	All applicable Package A	All applicable Package A
CONDITIONING SYSTEMS	Requirements must be met	Requirements must be met	Requirements must be met
ALL NEW DUCTS	R-6 for ducts in unconditioned	R-6 for ducts in unconditioned	R-6 for ducts in unconditioned
	area, duct testing(Package A)	area, duct testing(Package A)	area, duct testing(Package A)
EXTEND DUCTS FROM EXISTING <sup>10</sup>	R-6 for ducts in unconditioned	R-6 for ducts in unconditioned	R-6 for ducts in unconditioned
	area, duct testing if >40' new	area, duct testing if >40' new	area, duct testing if >40' new
	or replaced (see Package A)	or replaced (see Package A)	or replaced (see Package A)

- 6. Whole house fan is required for additions > 1000 ft<sup>2</sup>, min 2 CFM / ft<sup>2</sup> of entire dwelling CFA, min 1 ft<sup>2</sup> free attic vent area / 375 WHF CFM
- 7. Whole building ventilation fan is required for additions  $> 1000 \text{ ft}^2$ , ASHRAE 62.2 Section 4 for min airflow, use CFA of entire dwelling
- 8. For a typical residential split system, furnace AFUE = 0.80 min and AC SEER =13.0 min until 1/1/2015
- 9. A supplemental heating unit of max 2kW or 7000 Btu/Hr controlled by time-limiting device ≤ 30 minutes
- 10. Existing furnace and AC units do not need to meet current standard, but must be capable to heat addition to 68°F

□ PLUMBING- 2<sup>nd</sup> WH allowed to serve addition if: ≤75,000 Btu(storage) or ≤200,000 Btu(instantaneous)

